

# PATENT ABSTRACTS OF JAPAN

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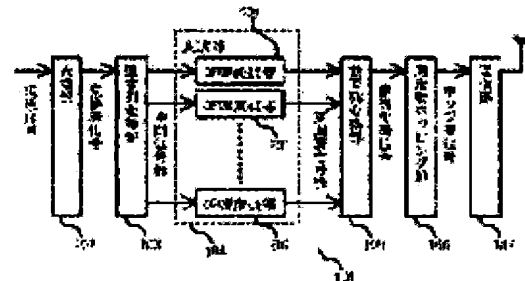
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(54) APPARATUS AND METHOD FOR RADIO TRANSMITTING AND RECEIVING, AND PROGRAM THEREOF

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a radio transmitting apparatus which is suitable to reduce the transmitting errors even if the amounts of interferences are different for the slots of a frequency hopping transmission.

SOLUTION: The converter 102 of the apparatus 101 for transmitting Walsh-Hadamard transforms a transmitting signal. A serial-parallel converter 103 serial-parallel converts the transmitting signal. A modulator 104 OFDM-modulates the signals. A parallel-serial converter 105 parallel-serial converts the signals. A frequency hopping unit 106 frequency-hops the signal. A transmitting unit 107 transmits the signal. Meanwhile, the receiving unit of the apparatus for receiving receives the signal transmitted from the apparatus 101 for transmitting. A frequency de-hopping unit frequency de-hops the signal. The



serial-parallel converter serial-parallel converts the signal. The demodulator OFDM-demodulates the signals. The parallel-serial converter parallel-serial converts the signals. An inverter performs the signal to inverse Walsh-Hadamard transforms to obtain a transmitting signal.